



Report to: General Committee

Meeting Date: June 12, 2018

SUBJECT: 020-R-18 Consulting Engineering Services for West Thornhill - Phase 4 Storm and Sanitary Sewer Upgrades

PREPARED BY: Prathapan Kumar, Senior Manager, Ext. 2989
Flora Chan, Senior Buyer, Ext. 3189

RECOMMENDATIONS:

- 1) THAT the report entitled “020-R-18 Consulting Engineering Services for West Thornhill - Phase 4 Storm and Sanitary Sewer Upgrades” be received;
- 2) AND THAT the detailed design work under contract 020-R-18 Consulting Engineering Services for West Thornhill - Phase 4 Storm and Sanitary Sewer Upgrades (inclusive of Phases 4A, 4B, 4C and 4D) be awarded to the highest ranked, lowest priced Bidder, R.V. Anderson Associates Limited, in the amount of \$828,911.52, inclusive of HST;
- 3) AND THAT a 10% contingency in the amount of \$82,891.15, inclusive of HST, be established to cover any additional construction costs and that authorization to approve expenditures of this contingency amount up to the specified limit be in accordance with the Expenditure Control Policy;
- 4) AND THAT the Consulting Engineering Services for detailed design award in the amount of \$911,802.67 (\$828,911.52+ \$82,891.15) be funded from the capital project 058-6150-18280-005 “West Thornhill Flood Control Implementation – Phase 4”;
- 5) AND THAT the remaining budget of \$3,997.33 in capital project 058-6150-18280-005 “West Thornhill Flood Control Implementation – Phase 4” will not be required from the Stormwater Fee Reserve;
- 6) AND THAT the contract administration services award (inclusive of 10% contingency) for: Phase 4A in the amount of \$410,144.70 (\$372,858.82 + \$37,285.88), Phase 4B in the amount of \$414,263.94 (\$376,603.58 + \$37,660.36), Phase 4C in the amount of \$427,158.97 (\$388,326.34 + \$38,832.63), and Phase 4D in the amount of \$431,502.08 (\$392,274.62 + \$39,227.46), be requested as part of the 2021, 2023, 2024 and 2025 Capital budget process, subject to Council approval;
- 7) AND THAT the future Purchase Order for contract administration of Phases 4A, 4B, 4C & 4D be updated to reflect the actual construction time required based on the final design; and
- 8) AND THAT Staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

The purpose of this report is to obtain Council approval to award for Consulting Engineering Services for West Thornhill - Phase 4 Storm and Sanitary Sewer Upgrades.

BACKGROUND:

Stormwater flood control implementation strategy was approved by Council on November 8, 2011 for the West Thornhill area in accordance with the City's November 2010 Class EA Study. The City-wide Flood Control Program is a 30 year program with an estimated cost of \$234M - \$288M (2014 dollars).

The first phase (1A, 1B & 1C) of the remediation includes storm sewer capacity upgrades in the Bayview Glen neighbourhood, second phase (2A, 2B, 2C & 2D) includes the Grandview area, third phase (3A, 3B & 3C) includes Clark Avenue/ Henderson Avenue area and Phase 4 includes Royal Orchard Road area.

Project Status:

Area	Current Implementation Schedule	Status
Phase 1A: Bayview Glen Area	2014 - 2015	Completed as of Nov 2016; Maintenance completion Nov 2017
Phase 1B: Bayview Glen Area	2015 - 2016	Substantially completed as of Aug 2016; Maintenance completion Aug 2018
Phase 1C: Canadiana Road	2016	Substantially completed as of Dec 2016 Maintenance completion Dec 2018;
Phase 2A: Grandview Area	2016 - 2017	Substantially completed as of Dec 2016; Maintenance completion Dec 2018
Phase 2B: Grandview Area (Park & Proctor Ave)	2017 - 2018	Substantially completed as of Dec 2017; Maintenance completion Dec 2019
Phase 2C: Grandview Area	2018 - 2019	Construction Commencement: June 2018
Phase 2D: Grandview Area	2019 - 2020	Design – 90% completed
Phase 3: Clark Ave/ Henderson Area	2020 - 2022	Design – 60% completed
Phase 4: Royal Orchard Area (This Design Award)	2021 & 2023 - 2025	

The scope of work under this award includes engineering services and all other sub consultant services related to upgrading the existing storm and sanitary sewers in West Thornhill Area as part of the West Thornhill Flood Control Implementation Program

The scope of work includes, but not limited to the following:

- Background Review and Data Collection
- Archaeological Assessment Review
- Hydrologic and Hydraulic Model Updates
- Sanitary Sewer Assessment
- Downspout Disconnection Survey
- Foundation Connection Survey Including CCTV Inspections of Storm and Sanitary Laterals
- Topographic Survey
- Sub Surface Utility Engineering Survey
- Geotechnical Investigation
- Tree Assessment
- Preliminary Design and Cost Estimates
- Detailed Design and Cost Estimates
- Preparation of Tender Documents

Additionally, after construction award, the consultant will provide contract administration and construction inspection services during the implementation of the project anticipated to be spread over a period of 4 years and post construction and warranty period inspection services. The consultant will retain specialist consultants to provide their services for arborist, biologist, fluvial or any other specialty consultant that may be needed during the construction phase.

Bid Information:

Advertised	ETN (Electronic Tendering Network)
Bids closed on	May 11, 2018
Number picking up the Bid document	7
Number responding to the Bid	3

Proposal Evaluation:

The Evaluation Team was comprised of staff from the Environmental Services Department and facilitated by staff from the Procurement Department. Due to the complexity of the project, staff wanted to ensure that bidders had the necessary qualifications and experience to carry out the work and as such, the City released this RFP utilizing a two-stage process.

Stage One (1) – Technical Evaluation:

Under Stage 1 – Technical Evaluation, Bidders were assessed against pre-determined criteria as outlined in the RFP; Experience/Past Performance of the consulting firm 20%, qualifications and experience of the project manager and project team 20% and project delivery 30% totaling 70%. Upon completion of Stage 1 (technical evaluation), the Price Proposal (Bid Form) provided by those Bidders who qualified from Stage 1, (minimum score of 75%, or 52.5 points out of 70 required), proceeded to Stage 2 for price evaluation.

Suppliers	Score (out of 70)
R.V. Anderson Associates Limited	65.9
WSP Canada Group Limited	57.6
Associated Engineering	53.8

Stage Two (2) – Price Evaluation:

Based on the Stage 1 evaluation, Bidders who received a minimum of 75% or 52.5 points out of 70 proceeded to Stage 2 - Price Evaluation. The price proposal provided by the Bidders is evaluated out of 30 points, based on the criteria outlined in the RFP.

Suppliers	Score (out of 30)
R.V. Anderson Associates Limited	30.0
WSP Canada Group Limited	29.9
Associated Engineering	28.5

**Financial score out of 30 includes both price for both Design and Contract Administration Services and the Bid prices ranged from \$2,358,974.88 to \$2,478,995.71, inclusive of HST Impact.

Stages 1 & 2 – Combined Overall Scoring

The scores from the Stage 1 and 2 evaluations were combined to formulate final overall scoring, as summarized below:

Suppliers	Score (out of 100)
R.V. Anderson Associates Limited	95.9
WSP Canada Group Limited	87.5
Associated Engineering	82.2

R.V. Anderson Associates Limited, the highest ranked bidder with the highest technical score and lowest price, demonstrated a good understanding of the project, had an experienced and qualified project team and illustrated a comprehensive plan and methodology for the project.

After evaluation scoring completed, Staff negotiated with R.V. Anderson Associates Limited, the highest ranked and lowest priced bidder, a 3.4% cost reduction from their initial proposed price, as allowed under the Purchasing By-Law. The price reduction will result in a total savings of \$81,993.12, while still maintaining the same level of project deliverables.

Project Schedule:

Phases	Estimated Construction Period	Anticipated Commencement	Anticipated Substantial Completion
Phase 4A – Royal Orchard Area	32 weeks	May 2021	July 2022
Phase 4B – Royal Orchard Area	32 weeks	May 2023	July 2024
Phase 4C – Royal Orchard Area	32 weeks	May 2024	July 2025
Phase 4D – Royal Orchard Area	32 weeks	May 2025	July 2026

FINANCIAL CONSIDERATIONS AND TEMPLATE:**Consulting Engineering Design Services for Phase 4 (inclusive of Phases 4A, 4B, 4C and 4D):**

The following table summarizes the financial considerations:

Phase		Storm	
4	Budget Available for Phase 4 Design (A)	\$ 915,800.00	058-6150-18280-005 " West Thornhill Flood Control Implementation – Phase 4 Design"
	Less: Design Award for Phase 4 (B)	\$ 828,911.52	Award to R.V. Anderson Associates Ltd. (incl. of HST impact)
	Less: Design Contingency (10%) (C)	\$ 82,891.15	
	Total Cost of Phase 4 Design (D) = (B) + (C)	\$ 911,802.67	
	Budget Remaining (E) = (A) - (D)	\$ 3,997.33	*

*The remaining budget of \$3,997.33 will not be required from the Stormwater Fee Reserve.

Future Contract Administration Services for Phases 4A, 4B, 4C and 4D:

The Purchase Order will not be issued until 2021, 2023, 2024 and 2025, subject to Council approval of the respective year's Capital Budgets. Under this award, Staff are able to lock in pricing for the contract administration and contract inspection required in these years.

Phase		Storm	Phase
4A	2021 Budget	N/A	Subject to Council approval of the 2021 Capital budget
	Contract Administration (F)	\$ 372,858.82	
	CA Contingency (10%) (G)	\$ 37,285.88	
	Total Cost of Phase 3A (H) = (F) + (G)	\$ 410,144.70	
4B	2023 Budget	N/A	Subject to Council approval of the 2023 Capital budget
	Contract Administration (I)	\$ 376,603.58	
	CA Contingency (10%) (J)	\$ 37,660.36	
	Total Cost of Phase 3B (K) = (I) + (J)	\$ 414,263.94	
4C	2024 Budget	N/A	Subject to Council approval of the 2024 Capital budget
	Contract Administration (L)	\$ 388,326.34	
	CA Contingency (10%) (M)	\$ 38,832.63	
	Total Cost of Phase 3B (N) = (L) + (M)	\$ 427,158.97	
4D	2025 Budget	N/A	Subject to Council approval of the 2025 Capital budget
	Contract Administration (O)	\$ 392,274.62	
	CA Contingency (10%) (P)	\$ 39,227.46	
	Total Cost of Phase 3B (Q) = (O) + (P)	\$ 431,502.08	
Total Cost of Phases 4A, 4B, 4C and 4D (R) = (H + K + N + Q)		\$ 1,683,069.70	

The cost estimate for Phases 4A, 4B, 4C and 4D are based on an estimated construction period of 32 weeks. The construction period may change subject to detailed design and therefore the purchase order for Phases 4A, 4B, 4C and 4D may need to be adjusted.

OPERATING BUDGET AND LIFE CYCLE IMPACT

The constructed stormwater and waterworks infrastructure is estimated to last 100 years. As such, there is no incremental life cycle impact over the next 25 years. There is no incremental operating budget impact.

ALIGNMENT WITH STRATEGIC PRIORITIES:

The proposed flood remediation program is in line with City's goal to provide better quality services to the public and is consistent with the Building Markham's Future Together strategic priority on the "Growth Management" and "Environment" as it considers sustainability on the built environment.

BUSINESS UNITS CONSULTED AND AFFECTED:

Finance department has been consulted and their comments have been incorporated.

RECOMMENDED BY:

2018-06-04

2018-06-04

X 

X 

Phoebe Fu
Director of Environmental Services
Signed by: cxa

Brenda Librecz
Commissioner of Community & Fire Services
Signed by: cxa

ATTACHMENTS:

Attachment A – West Thornhill – Phase 4 Area

Attachment B – West Thornhill Flood Control Implementation Phases